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REMARKS

This Supplemental Amendment is submitted to properly identify claims 35 and 76.

Reconsideration of the rejection of the subject matter of this application is requested.

Status of Claims

Claims 1-44, and 46-79 remain for consideration. Claim 35 has been amended to combine claims 35 and 45, and claim 45 has therefore been canceled.

Claims 5, 12, 39-41, 43, 44, 50, 51, 53, 54, 56-59, and 71-73 have been designated as containing allowable subject matter with the suggestion that if they are rewritten in independent form they would be allowed. In view of this response, and what is believed a clear case for overcoming the main rejection of record for the claims that are now pending, these remaining claims have been retained as filed.

New claim 80 has been added to define the loopback function in more detail.

The Drawing

The drawing on file appears to be acceptable.

Rejections On Prior Art

Claims 35-37, 42 and 45 stand rejected under 35 U.S.C. 102 as met by Nagami et al.

Claims 1-4, 6-11, 13-34, 55, 60-70 and 74-79 stand rejected under U.S.C. 103 as unpatentable in view of the Theimer et al. paper in view of the Nagami et al. paper.

circuitry

identifies an incoming label for the received packet and determines the next hop upstream using a stored loopback label forwarding entry associated with the identified incoming label.

52. (previously presented) The router of claim 46, wherein the router is a label switching router in a multi-protocol label switching network.

53. (previously presented) The router of claim 52, wherein the processing circuitry

determines whether the received packet is a loopback in-band network management packet.

54. (previously presented) The router of claim 53, wherein the processing circuitry determines whether the label switching router is a loopback label switching router for the received loopback in-band network management packet.

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Argument

Applicants' invention is characterized by the use of loopback packets for OA & M functions in a network. In a preferred embodiment the loopback packets are used in a multi-protocol label switching network (MPLS) network.

The Nagami et al. paper

Addressing first the Nagami et al. paper, and the rejection of claims 35-37, 42 and 45 over this reference, it is pointed out that this paper describes ATM networks. (It is also of interest that the paper does not deal with OA&M.) One of the objectives of Nagami et al. is to adapt an ATM network to resemble a MPLS network. However, it should be recognized that neither the network being adapted, or the product of the adaptation, is an MPLS network. Nagami et al. recognize that the packet labels in an ATM network are not suitable for an MPLS environment since the labels constantly change. Accordingly they propose a new kind of labeling system for their packets. According to this adaptation, a virtual path or virtual connection (VC) is designed and used in the packet label. However, the VC or VCID is not the same as the label in an MPLS network.

With this in mind, applicant has amended claim 35 to specify that the bi-directional network in which packets are returned is an MPLS network. That characterization clearly distinguishes claim 35, and dependent claims 36- 44, from the cited art.

The Theimer et al. paper

This section is responsive to the rejection of claims 1-4, 6-11, 13-34, 55, 60-70 and 74-79 over the Theime et al. paper in view of the Nagami et al. paper.

includes a memory that stores routing information, and the processing circuitry determines the next hop upstream using the stored routing information associated with the replaced label.

49. (previously presented) The router of claim 48, wherein the routing information is next hop label forwarding entries.

50. (previously presented) The router of claim 46, wherein the processing circuitry

includes a memory that stores loopback label forwarding entries.

51. (previously presented) The router of claim 50, wherein the processing circuitry

identifies an incoming label for the received packet and determines the next hop upstream using a stored loopback label forwarding entry associated with the identified incoming label.

52. (previously presented) The router of claim 46, wherein the router is a label switching router in a multi-protocol label switching network.

53. (previously presented) The router of claim 52, wherein the processing circuitry

determines whether the received packet is a loopback in-band network management packet.

54. (previously presented) The router of claim 53, wherein the processing circuitry determines whether the label switching router is a loopback label switching router for the received loopback in-band network management packet.

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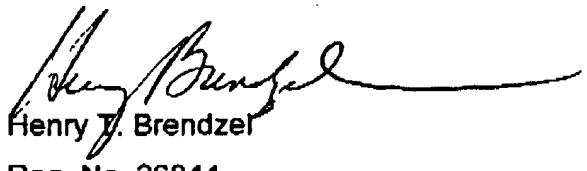
The paper written by Theimer et al. mentions loopbacks, but contains only a meager description of how loopbacks are implemented. At best it may be inferred that the loopback is used to verify connectivity. The system described in applicants' specification goes well beyond the scope of the Theimer et al. paper.

However, to simplify the prosecution and advance it to a conclusion, the accompanying affidavit under CFR 1.131 is presented to remove the Theimer et al. paper as a reference. The cover page of Exhibit 1 shows a date of September 1999, and the affiant declares that the work described in the three pages was done prior to the effective date of the Theimer et al. paper. The pages contain at least as much of the relevant description of the invention as that contained in the Theimer et al. paper. The secondary reference, the Nagami et al. paper, is discussed above. That paper does not mention loopbacks, which is an important feature in all of the claims 1-4, 6-11, 13-34, 55, 60-70 and 74-79, as well as in new claim 80.

In view of the amendments, the affidavit, and these remarks, reconsideration and allowance of claims 1-44 and 46-80 is requested.

Respectfully,



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